

## ABSTRACT

Temperature-sensing compositions can include an inorganic material, such as a semiconductor nanocrystal. The nanocrystal can be a dependable and accurate indicator of temperature. The intensity of emission of the nanocrystal varies with temperature and can be highly sensitive to surface temperature. The nanocrystals can be processed with a binder to form a matrix, which can be varied by altering the chemical nature of the surface of the nanocrystal. A nanocrystal with a compatibilizing outer layer can be incorporated into a coating formulation and retain its temperature sensitive emissive properties.

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